5. ENVIRONMENTAL COMPLIANCE

5.1 Applicable or Relevant and Appropriate Requirements

The OU 1-10 ROD (DOE-ID 1999) presents the applicable or relevant and appropriate requirements (ARARs) specific to the V-Tanks remedial action. Table 5-1 summarizes the ROD-identified ARARs, relevancy, and how each requirement has been addressed in the remedial design or will be met during the remedial action. Additional identified applicable environmental regulations under consideration for the ESD are presented in Table 5-2.

Table 5-1. ARARs for the V-Tanks (TSF-09 and TSF-18) selected remedy.

Category	Citation	Relevancy[a]	Compliance Strategy
Action-Specific ARARs			
Rules for the Control of Air Pollution in Idaho			
"Toxic Substances" IDAPA 16.01.01.161 "Toxic Air Emissions" IDAPA 16.01.01.585 and .586	The release of carcinogenic and noncarcinogenic contaminants into the air must be estimated before start of construction, controlled, if necessary, and monitored during excavation of soil, removal of the waste and tank system, and decontamination of the tanks and piping.	A	Releases of carcinogenic and noncarcinogenic contaminants into the air from the site are addressed in Appendix D in which modeling indicates under worst case scenarios that chemical and radionuclide concentrations will not come close to approaching IDAPA air quality limits, NESHAP limits for radionuclides, or OSHA permissible exposure limits. Air emissions will be monitored during excavation and dust suppression measures will be used, as indicated in Appendix B, Design Specifications 02200.
"Fugitive Dust" IDAPA 16.01.01.650 and .651	Requires control of dust during excavation and removal of the tanks and piping.	A	Dust suppression measures will be implemented, as necessary, during the remedial action to minimize the generation of fugitive dust, as indicated in Appendix B, Design Specifications. These measures may include water/surfactant sprays, keeping vehicle speeds to a minimum, and work controls during periods of high wind.
"Requirements for Portable Equipment" IDAPA 16.01.01.500.02	Portable equipment for removal of the waste, tanks, and piping, and any portable support equipment must be operated to meet state and federal air emissions rules.	A	When used, portable equipment will comply with the requirements of MCP-3480 Section 4.2.8 or equivalent evaluation.
National Emission Standards for Hazardous Air Pollutants (NESHAP)			
"Radionuclide Emissions from DOE Facilities" 40 CFR 61.92 "Emission Monitoring" 40 CFR 61.93 "Emission Compliance" 40 CFR 61.94(a)	Limits exposure of radioactive contamination release to 10 mrem/yr for the off-Site receptor and establishes monitoring and compliance requirements.	A	Radionuclide emission calculations and air modeling are presented in Appendix D. The model resulted in an estimate of approximately 5 E-7 mrem/yr dose at the INEEL fence line located 12 km (7.5 mi) northeast of TAN. The calculated emissions will be included in the INEEL's annual NESHAP report, which determines the effective dose equivalent from the INEEL to members of the public.

Table 5-1. (continued).

Category	Citation	Relevancy[a]	Compliance Strategy
Resource Conservation and Recovery Act (RCRA) – Standards Applicable to Generators of Hazardous Waste			
"Hazardous Waste Determination" IDAPA 16.01.05.006 (40 CFR 262.11)	A hazardous waste determination (HWD) is required for the waste, tanks, piping, and any secondary waste generated during remediation.	A	A HWD will be based on an evaluation of sampling data and process knowledge to determine characterization of the waste. A preliminary determination is provided in Appendix C.
"Manifest" IDAPA 16.01.05.006 (40 CFR 262, Subpart B)	Establishes requirements for transporting hazardous waste to the treatment and/or disposal site.	A	Prior to transporting hazardous waste offsite, Uniform Hazardous Waste Manifests will be prepared.
"Pre-Transportation Requirements" IDAPA 16.01.05.006 (40 CFR 262.30–262.33)			The waste will be packaged, labeled, marked, and placarded for offsite transportation.
RCRA – Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Units			
"General Waste Analysis" IDAPA 16.01.05.008 (40 CFR 264.13[a][1–3])	Analysis requirements apply to the soils, waste, tanks, piping, and secondary waste generated during remediation.	A	Samples will be obtained to determine whether the generated waste material meets the acceptance criteria for the designated disposal facility (or facilities).
"Security of Site" IDAPA 16.01.05.008 (40 CFR 264.14)	Measures must be taken to restrict access to the site during excavation; removal of the waste, tanks, and piping; and decontamination of the tank and piping.	A	INEEL security measures, such as access restrictions, will be implemented during remediation activities. A 6-ft security fence will be used around the entire perimeter of the site. Warning signs will be posted. Temporary barriers will be erected around the excavation for further access restriction.
"General Inspections" IDAPA 16.01.05.008 (40 CFR 264.15)	Regular inspections must be performed during remediation.	A	Routine inspections will be conducted during and following remediation. During remediation activities, inspections will be conducted to fulfill requirements of 40 CFR 264 Subparts I and J. After remediation, waste in long-term onsite storage will be inspected to meet the requirements of 40 CFR Subparts I and J.
"Personnel Training" IDAPA 16.01.05.008 (40 CFR 264.16)	All personnel involved in soil excavation; removal of the waste, tanks, and piping; and decontamination of the tank and piping must be trained.	A	The substantive training requirements for training are listed in the HASP. Personnel will be trained in hazardous waste management requirements.

Table 5-1. (continued).

Category	Citation	Relevancy[a]	Compliance Strategy
"Preparedness and Prevention" IDAPA 16.01.05.008 (40 CFR 264, Subpart C)	Applies to soil excavation, waste and tank system removal, and decontamination activities.	A	Emergency equipment (fire extinguishers, communications systems, etc.) will be identified, tested, and maintained as described in the site HASP. The arrangements with local authorities will also be detailed.
"Contingency Plan and Emergency Procedures" IDAPA 16.01.05.008 (40 CFR 264, Subpart D)	Applies to soil excavation, waste and tank system removal, and decontamination activities.	A	The substantive requirements of a contingency plan will be maintained in the site HASP. The HASP establishes an emergency response plan that documents the coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents, which could threaten human health or the environment.
"Equipment Decontamination" IDAPA 16.01.05.008 (40 CFR 264.114)	All equipment used during remediation must be decontaminated if hazardous waste is contacted.	A	Equipment decontamination will be conducted in accordance with the project Decontamination Plan.
"Use and Management of Containers" IDAPA 16.01.05.008 (40 CFR 264.171–178)	Applicable to the soils, waste, tanks, piping, and any secondary hazardous waste-generated remediation that is managed in containers.	A	All onsite containers will be selected to ensure waste is compatible with the container and container integrity is maintained. Weekly inspections will be conducted. Secondary containment for all containers with free liquids will be used.
"Tank Closure and Post-Closure Care" IDAPA 16.01.05.008 (40 CFR 264.197[a])	Applies to the soils, waste, tanks, and piping.	A	All waste and system components will be removed. Confirmation sampling will be performed as detailed in the Remedial Action Confirmation Field Sampling Plan. At closure of each tank system, a detailed review of all analytical data associated with the waste will be performed to ensure all tanks and system components are managed accordingly.
RCRA – Land Disposal Restrictions			
"Land Disposal Restriction (LDR) Treatment Standards" IDAPA 16.01.05.011 (40 CFR 268.40 [a][b][e])	The waste, tank, and piping must be treated, if necessary, to meet LDR criteria before disposal.	A	A preliminary HWD has been made, and applicable treatment standards associated with each constituent have been identified (Appendix C). All waste generated and associated data will be compared to these values to ensure strict compliance to LDRs, prior to treatment and eventual disposal of this waste.
"Treatment Standards for Hazardous Debris" IDAPA 16.01.05.011 (40 CFR 268.45[a][b][c][d])		A	These alternative treatment standards will be considered for all debris items generated. Specifically, a majority of items associated with equipment and piping removal will be shipped offsite for treatment as debris.

Table 5-1. (continued).

Category	Citation	Relevancy[a]	Compliance Strategy
"Universal Treatment Standards" IDAPA 16.01.05.011 (40 CFR 268.48[a])		A	A preliminary HWD has been made based on existing analytical data (Appendix C), which includes the identification of all reasonably expected to be present underlying hazardous constituents and associated universal treatment standards.
"Alternative Treatment Standards for Contaminated Soil" IDAPA 16.01.05.011 (40 CFR 268.49)	Applies to any contaminated soil that is to be removed from the V-Tank and disposed at an approved facility on the INEEL or off the INEEL.	A	Current compliance strategy, which these alternative treatments are being considered for, is onsite treatment/disposal of soils. However, it is not expected that states in which current offsite disposal facilities are being considered have adopted these alternative standards. Therefore, current strategy is to move forward assuming compliance with the requirements of 40 CFR 268.40 and 268.45.
"CERCLA Off-Site Policy" 40 CFR 300.440		A	Prior to offsite disposal, EPA Region 10 will be consulted to ensure that any offsite vendor(s) selected for treatment and/or disposal will meet this requirement. The CERCLA offsite policy is not required for ICDF treatment and/or disposal.
Toxic Substance Control Act – PCBs			
"PCB Remediation Waste: Performance-based Disposal" 40 CFR 761.61 (b)(1)	The tank waste must be treated or decontaminated to meet PCB disposal criteria. Applies only to the tank waste.	A	Current strategy is to separate out the multiphasic waste from the tanks and to merge the solid phase in accordance with 40 CFR 761.60(e). It is expected that the liquid phase of these tank wastes may be managed as ≤50-ppm waste.
"Decontamination Standards and Procedures: Self-implementing Decontamination Procedures" 40 CFR 761.79(c)(1) and (2)	Applies to decontamination of the tank, piping, and equipment that comes into contact with the tank waste.	A	For debris consisting of tanks, piping, and equipment, the current strategy will be to meet the TSDF's (e.g., Envirocare) waste acceptance criteria. Decontamination will be conducted according to applicable regulations and reduced to levels acceptable to the TSDF's WAC.
"Decontamination solvents" 40 CFR 761.79(d)	Applies to solvents used for decontamination.	A	For solvents used for decontamination, the current strategy will be to meet the TSDF's (e.g., Envirocare) waste acceptance criteria, which is that the liquids must be solidified prior to shipment.
"Limitation of exposure and control of releases" 40 CFR 761.79(e)	Applies to all persons who will be conducting decontamination activities of the tank and piping.	A	For personnel performing decontamination activities, the workers will comply with the Health and Safety Plan for this project.
"Decontamination Waste and Residues" 40 CFR 761.79(g)	Applies to the decontamination of waste and residuals.	A	For decontamination waste and residues, the current strategy will be to meet the TSDF's (e.g., Envirocare) waste acceptance criteria. All liquids will be solidified prior to shipment.

Table 5-1. (continued).

Category	Citation	Relevancy[a]	Compliance Strategy
To-be-considered (TBC) guidance			
Radiation Protection of the Public and the Environment			
DOE Order 5400.5, Chapter II (1)(a,b)	Order that limits the effective dose to the public from exposure to radiation sources and airborne releases.	–	Will be met by administrative and engineering controls as well as personnel real-time monitoring during excavation of contaminated soils, tank contents removal, and tank and ancillary piping removal. Excavated areas will be backfilled after closure. Job Safety Analyses and Radiological Work Permits will be prepared for tasks where there is the potential for exposures to radioactive contamination/materials. Radiological work permits will only be used as determined by the radiological control technician, based on the INEEL *Radiological Control Manual* (PRD-183).
Institutional Controls			
Region 10 Final Policy on the Use of Institutional Controls at Federal Facilities	Applies to contamination left in place or remaining above 1E-04 risk.	–	The institutional control requirements specified in the *Institutional Control Plan for the Test Area North Waste Area Group 1* (DOE-ID 2000e). This plan documents current and future activities for implementing institutional controls in accordance with the Operable Unit 1-10 Record of Decision and was designed to meet the Region 10 final policy.

a. A = applicable and RA = relevant and appropriate

– = TBCs are not classified as applicable or relevant and appropriate.

CFR = Code of Federal Regulations

NESHAP = National Emission Standards for Hazardous Air Pollutants

IDAPA = Idaho Administrative Procedures Act (Note: The original ROD ARARs [16.00 series] will continue to be cited and will remain in effect, as 16.01, but the numbering system has been changed to 58.01 [58.00 series]).

Table 5-2. Newly Identified Regulatory Requirements for the OU 1-10 V-Tank Remediation, under consideration in the ESD.

Requirement	Action/ Chemical/ Location	Applicable or Relevant/Appropriate	Brief Description of Requirement	How Applicable	Compliance Strategy
40 CFR 264.192(a)(1)(2)(3) and (b)	Action	Applicable	A registered professional engineer must certify new tank systems.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and ion exchange (IX) columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and transferring sludge from high-integrity containers (HICs) to drums. This is relevant and appropriate to the decontamination pad and related sump as a Temporary Unit.	All design drawings and specifications will be stamped by an Idaho Registered Professional Engineer.
40 CFR 264.192(d)	Action	Applicable	New tank systems must be leak tested prior to use.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and IX columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and transferring sludge from HICs to drums. This is relevant and appropriate to the decontamination pad and related sump as a Temporary Unit.	All systems will have a mockup simulation and pre-startup test for testing and functional operations.
40 CFR 264.193(a)(1), (b), (c), (d), (e)(1), and (f)	Action	Applicable	Tank systems must have secondary containment.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and IX columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and transferring sludge from HICs to drums.	All tank systems will have secondary containment. (Appendix A, Drawings 4, 5, and 20 of 20; Appendix C, ABQ12-CE008)

Table 5-2. (continued).

Requirement	Action/ Chemical/ Location	Applicable or Relevant/Appropriate	Brief Description of Requirement	How Applicable	Compliance Strategy
				The sump serves as the secondary containment for the decontamination pad. The sump must be constructed of a material and in such a way that it would retain its shape if lifted from the ground. Hazardous waste will be removed from the sump at the end of each operating day.	
40 CFR 264.194(a)	Action	Applicable	Waste must be compatible with tank materials.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and IX columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and transferring sludge from HICs to drums.	All wastes will be compatible with materials that they are placed in contact with.
40 CFR 264.194(b) and (c)	Action	Applicable	Tank systems must be designed to prevent spills. If spills do occur, follow CFR 264.196.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and IX columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and transferring sludge from HICs to drums. This is relevant and appropriate to the decontamination pad and related sump as a Temporary Unit.	All tank systems will have secondary containment and spill prevention measures implemented. This includes tanks for stormwater and decon water.
40 CFR 264.195	Action	Applicable	Tank systems and ancillary equipment must be inspected each operating day.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and IX columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and	All tank systems will be inspected each operating day and noted on a daily log.

Table 5-2. (continucd).

Requirement	Action/ Chemical/ Location	Applicable or Relevant/Appropriate	Brief Description of Requirement	How Applicable	Compliance Strategy
				transferring sludge from HICs to drums. This is relevant and appropriate to the decontamination pad and related sump as a Temporary Unit. The pad and sump will be inspected daily for tears, rips, and signs of leakage. Waste will be removed from the sump at the end of each operating day. If the decontamination pad/sump has not been used, then an inspection is not required that day.	
40 CFR 264.196	Action	Applicable	Leaks from tank systems and ancillary equipment.	This is applicable to equipment used to pump tank contents into containers and to equipment used to treat liquid waste through carbon and IX columns. This requirement is relevant and appropriate to transferring liquid waste back to the tanks, dewatering sludge, and transferring sludge from HICs to drums. This is relevant and appropriate to the decontamination pad and related sump as a Temporary Unit.	All equipment will be leak tested prior to use. All systems will have secondary containment should leaks occur.
40 CFR 264.553	Action	Relevant and Appropriate	Tank and container storage areas used during remedial actions.	Identifies the decontamination pad and related sump as a temporary unit and allows application of tank requirements.	Tank requirements will be applied to temporary tank and decon pad.
40 CFR 761.40	Action	Applicable	Establishes marking requirements for containers and storage locations of PCB waste.	Applicable to short- and long-term storage of PCB wastes at the INEEL from V-Tank remediation.	All storage areas will be labeled and marked accordingly.

Table 5-2. (continued).

Requirement	Action/ Chemical/ Location	Applicable or Relevant/Appropriate	Brief Description of Requirement	How Applicable	Compliance Strategy
40 CFR 761.65(a)(1)	Action	Applicable	Allows storage of radioactive PCBs >1 year provided a written record documenting attempts to identify disposal options is maintained.	This applies to PCB waste generated during V-Tank remediation.	A written record will be kept of all attempts to dispose of PCB-contaminated waste.
40 CFR 761.65(b)(1)(i)–(v)	Action	Applicable	Establishes storage requirements for PCB waste.	Applies to temporary storage of PCB waste near the V-Tanks and prior to shipment for long-term storage.	Temporary storage area will be constructed with appropriate berm and liner.
40 CFR 761.65(b)(1)	Action	Applicable	Establishes storage requirements for PCB waste.	Applicable to long-term storage of PCB wastes at the INEEL from V-Tank remediation.	The long-term storage area will be appropriately constructed to meet the requirement.
40 CFR 761.65(c)	Action	Applicable	Requires inspections of PCB waste every 30 days and allows storage of radioactive PCBs in containers not approved by the DOT.	Applicable to short- and long-term storage of PCB wastes at the INEEL from V-Tank remediation.	All PCB-contaminated waste will be inspected every 30 days, and a log will be maintained to verify inspection, in accordance with INEEL *Manual 17—Waste Management.*
40 CFR 761.65(c)(i)(4)	Action	Applicable	Allows 30-day storage of PCB waste.	Applicable to short-term storage of PCB wastes before entering interim storage (long-term storage).	A spill prevention controls and countermeasures plan will be written to address short-term PCB storage.